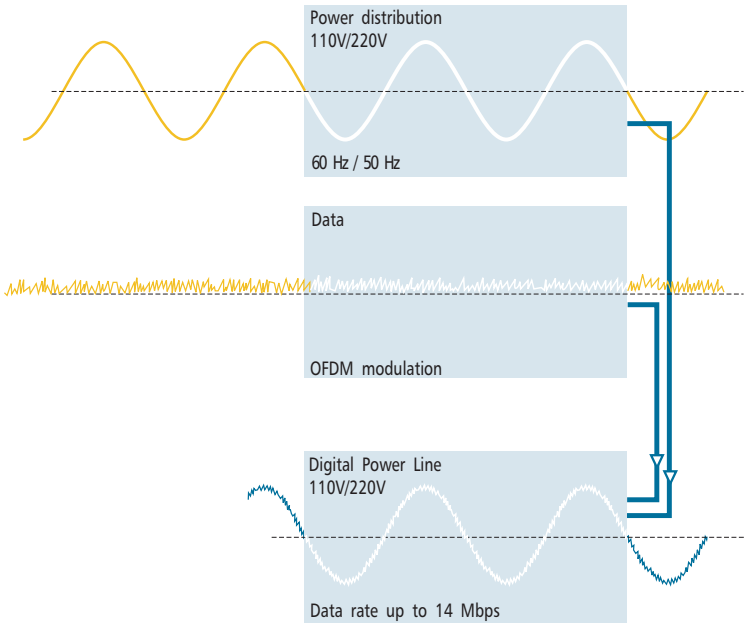
# Corinex
# Wireless to Powerline Access Point

Wireless to powerline local area network (LAN) solutions based on Corinex Wireless to Powerline Access Point products, connect a wireless device to the electrical wires in premises. The electrical wires build the "backbone" for other "wired" devices on the network, which are connected to this backbone by Corinex Powerline adapters. Any high-performance Corinex Wireless to Powerline Access Point extends the coverage of your network of electrical wires and provides access to the Internet and corporate or personal information from all mobile devices without expensive additional cabling infrastructure.




## Powerline Communications

Corinex Powerline products (USB, Ethernet, Wall Mount, Router and Wireless) are designed to use existing AC electrical wiring within the home as a networking physical medium. Robust performance in the electrical noisy power line channel is enabled by the use of the Orthogonal Frequency Division Multiplexing (OFDM) technology. This multi-carrier modulation scheme allows devices to dynamically "surf the channel" - instantly shifting data from one carrier to another as noise and attenuation conditions change. The OFDM technology finds the low noise, low attenuation portions of the spectrum available to it and continues data transmission.

Corinex Powerline products have been optimized for high-reliability networking applications. Internet and network access is available through every power outlet in the home or office. Corinex's HomePlug certified Powerline networking technology supports up to 14 Mbps data rates. Corinex Powerline adapters are certified by and compliant with the HomePlug Powerline Alliance Industry Specification 1.0.1. This ensures interoperability with other HomePlug devices. Powerline technology provides a high quality of service for the adapters to ensure secure, reliable channels for transferring files, streaming audio, video, or voice data and even online gaming.

## What Can a Corinex Wireless to Powerline Access Point Provide?

The Corinex Wireless to Powerline Access Point supports 802.11b standard based wireless client devices and the entirely new designed and enhanced Corinex Powerline and CableLAN products family, consisting of:

- Corinex Powerline Ethernet Adapter
- Corinex Powerline USB Adapter
- Corinex Powerline Ethernet Wall Mount
- Corinex CableLAN Adapter
- Corinex Powerline Router
- Corinex Diagnostics Kit
- Corinex Open Powerline Management

The combination of the Corinex powerline and the wireless access point technology enhances the capabilities of WLAN technology and maximizes area coverage by utilizing existing electrical "wires" infrastructure to provide a cost effective network deployment.

# Product Features

- **Full Compatibility with IEEE 802.11b and HomePlug 1.0.1**

The Corinex Wireless to Powerline Access Point (AP) fully complies with the IEEE 802.11b and the HomePlug 1.0.1 standard. This means that the wireless access point is fully interoperable with all other 802.11b compliant products. The access point uses microwave technology operating in the license-free 2.4 GHz band and offers bridging mode operation, DHCP client and IP filtering functionality. A dual (one external and one internal) dipole antenna provides superior polarized reception and diversity. The detachable external antenna can be replaced by any convenient third party antenna, according to customers needs. The AP's power jack is the connecting medium to the 14 Mbps digital powerline communication network based on the HomePlug 1.0.1 standard. This allows the easiest deployment of a wireless HotSpot area where every power outlet can be used as a powerline network interface to the access point.

- **Reliable Data Throughput**

The highest possible data throughput at any moment is obtained by dynamic rate scaling at a maximum of 11 Mbps, 5.5 Mbps, 2 Mbps and 1 Mbps, determined by the wireless connection. The dynamic rate scaling broadens the range of the connectivity by decreasing the speed of the digital signal strength. Therefore the maximum speed on the network is 14 Mbps within the Powerline segment of the network.

- **Networking Security**

The wireless access point provides a standard 40 bit Wired Equivalent Privacy (WEP) encryption for enhanced data privacy for the wireless network segment and uses the 64/128bit WEP (Wireless) and 56bit DES (Powerline) link encryption with key management for secured communication over the powerline network segment. By using DSSS (wireless) and OFDM (powerline) technologies, data corruption, interference and unauthorized detection are minimized.

- **High Usability and Manageability**

The Corinex Wireless to Powerline Access Point contains an HTTP server with a web configurable SNMP powerline agent. This enables you to connect to it and configure it by using your web browser. Every Corinex Powerline, CableLAN and Wireless product, no matter where it is located in the network, can be managed by the Corinex Open Powerline Management software or by using a web browser. This represents an ideal networking solution for homes, small to medium size offices, schools, hospitals, hotels and retail outlets, without pulling any new wires.

- Physical layer data rate of up to 14 Mbps over the power line with distances of up to 200 m, Multiprotocol communication (TCP/IP, NetBEUI, IPX/SPX)
- 56 Bit DES link encryption with key management for secured communication
- Orthogonal Frequency Division Multiplexing (OFDM) with sophisticated signal processing techniques for high data reliability in noisy media conditions
- Intelligent channel adaptation maximizes throughput under harsh channel conditions
- Integrated Quality of Service (QoS) features such as four-level prioritized random access, contention-free access, and segment bursting
- Implements a scheme with prioritization and repeat request for reliable delivery of Ethernet packets via packet encapsulation
- Enables users to connect individual PC's into a local area network through 110 V or 220 V electric powerline network
- Bandwidth for multimedia payloads including video, voice, data and networked gaming
- Easy to use and install, if you do not want to change the security settings, no drivers required
- Provides a secure and inexpensive Internet access
- Can be managed by Corinex Open Powerline Management software
- FCC and CE certified

# Product Specifications

**Product code**: CXP-WLA
Please refer to the Price List for the exact product code specification for your region.

**Product Content**

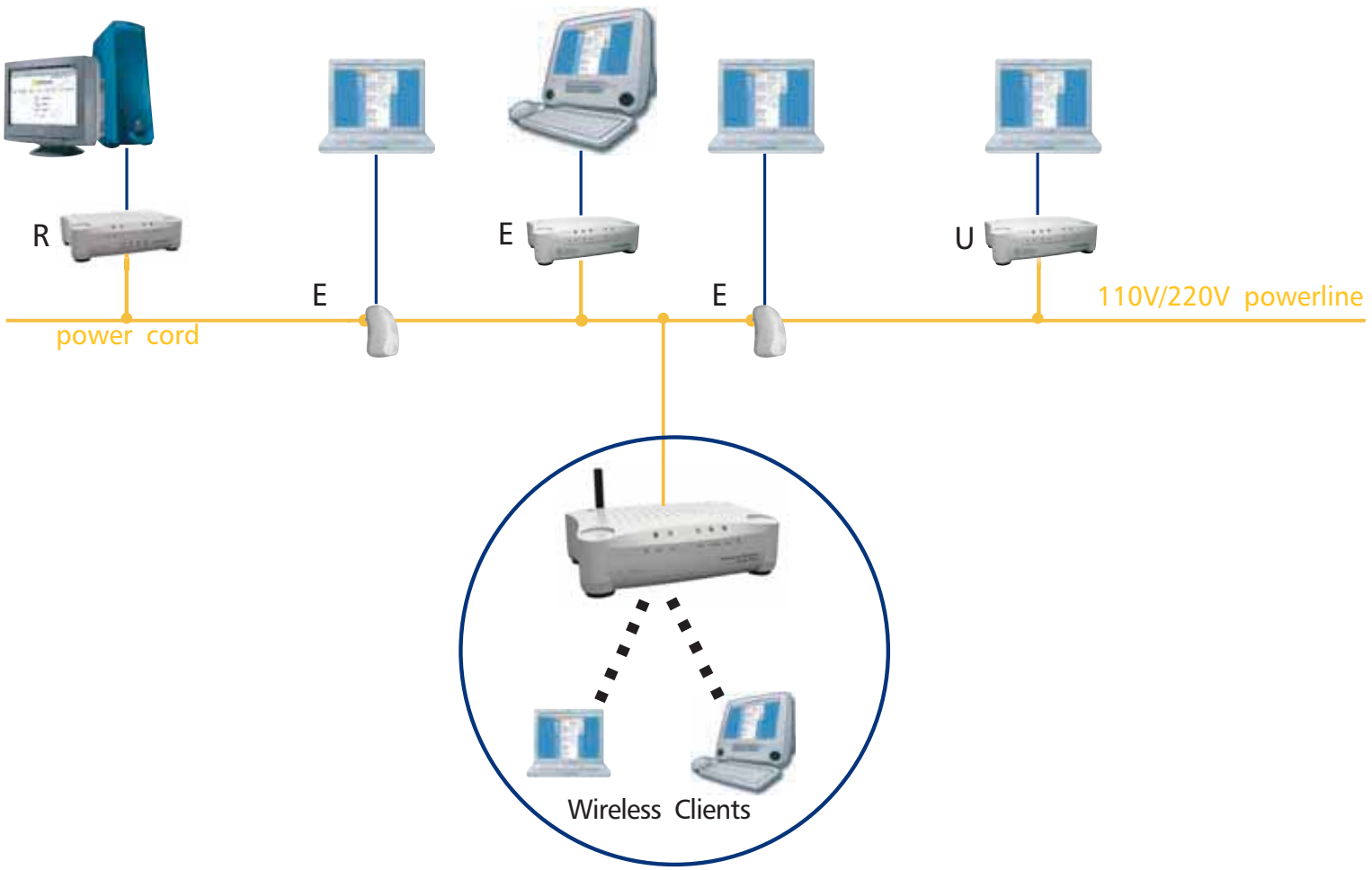
- Device
- Installation CD with
  - Setup Tool for most of operating systems (Win9x/NT/2000/XP, Linux, Mac OS X)
  - Detailed User Guide
- AC Power Adapter
- Detachable Wireless Antenna
- Printed Quick Start Guide

**Technical Specifications**

| | |
|---|---|
| Standards Compliance | HomePlug v 1.0.1 certified |
| | Windows 95/98/Me/2000/XP, Linux or Mac OS X compatible for the Setup Tool |
| | IEEE 802.11 b |
| Speed | Powerline: up to14 Mbps<br>Wireless: 11, 5.5, 2 and 1 Mbps,<br>Auto Fall-Back |
| Cabling type | Power cord to external power supply with four different plugs<br>EU, US, AUS and UK (110 V or 230 V) |
| LED Status Lights | Per unit: Test, Power<br>WLAN: Link/Activity<br>Powerline LAN: Link, Activity |
| Unit Dimensions | 148 mm L x 106 mm W x 47 mm H |
| Weight | 0,280 kg |
| Interface | Wireless IEEE 802.11 b<br>One DC power connector for both Powerline networking and power supply |
| Operating Temperature | 0° to 55°C (32°F to 131°F) |
| Operating Humidity | 10% to 85% non-condensing |

| | |
|---|---|
| Modulation | Powerline: OFDM / DQPSK / DBPSK<br>Wireless: DBPSK, DQPSK, CCK |
| MAC Protocol | Powerline: CSMA/CA<br>Wireless: CSMA/CA |
| Powerline Frequency Range | 4 MHz to 21 MHz (HomePlug 1.0.1) |
| DHCP | DHCP Client |
| Wireless Port Properties | Data Rates<br>- 1, 2, 5.5, 11 Mbps<br>Signal Frequency<br>- DBPSK, DQPSK, CCK<br>Encryption<br>- 64bit and 128bit WEP data encryption<br>- 802.1x and WPA data encryption<br>Channel<br>- America: FCC: 2.412~2.462 GHz (11 channels)<br>- Europe: CE/ETSI: 2.412~2.472 GHz (13 channels)<br>- Japan: 2.412~2.484 GHz (14 channels)<br>- France: 2.457~2.472 GHz(4 channels)<br>- Spain: 2.457~2.462 GHz (2 channels)<br>RF Power Output<br>- 20 dBm (typical)<br>Receiver Sensitivity<br>- -82dBm @11Mbps, PER<$8*10^{-2}$ |
| Software / Firmware | - AP and Client mode support<br>- DHCP Client<br>- Channel Selection<br>- Supports WEP (authentication and encryption)<br>- Web-based configuration via popular browser (MSIE, Netscape…)<br>- Firmware downloads and upgrades via web server<br>- Reset to default by web server or hardware button |
| Security | Powerline<br>- 56-bit DES using cipher block chaining<br>Wireless<br>- Hardware-based 40/64-bit & 128-bit WEP encryption, 802.1x and WPA encryption type |
| Forwarding Mode | Store and Forward |
| Antenna | Detachable SMA type antenna, 2 dB |
| Power Input | 110/120 or 220/240 V External Power Supply (6.5 V DC, 1 A) |
| Power Consumption | 5 W |
| Safety & EMI | UL/FCC and / or CB/CE<br>and / or international standards approved |

# Example of the Corinex Wireless to Powerline Access Point usage in combination with wireless clients and Corinex Powerline products




Corinex Wireless to Powerline Access Point

R Corinex Powerline Router

E Corinex Powerline Ethernet Adapter

U Corinex Powerline USB Adapter

E Corinex Powerline Ethernet Wall Mount

Corinex

HomePlug 14 Mbps CERTIFIED

Corinex is a registered trademark of Corinex Communications Corp.
HomePlug® is a registered trademark of HomePlug® Powerline Alliance.

Corinex Communications Corp.
World Trade Center
404-999 Canada Place
Vancouver, B.C.
Canada V6C 3E2
Tel: +1 - 604 - 692 0520
Fax: +1 - 604 - 694 0061
E-mail: global@corinex.com
http://www.corinex.com

Corinex Global, a.s.
Ruzova dolina 19
820 05 Bratislava
Slovak Republic
Tel.: +421 - 2 - 5021 4811
Fax: +421 - 2 - 5556 7309
E-mail: global@corinex.com

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